

10/021,205

RECEIVED
CENTRAL FAX CENTER

SEP 12 2006

- 4 -

REMARKS

In response to the Office Action mailed June 13, 2006, Applicants respectfully request reconsideration. Claims 1, 3, 5, 7, 9-11, and 13 were previously pending in this application. Claims 11 and 13 have been canceled, without prejudice. Claims 1, 5, and 7 have been amended. Support for these amendments can be found in the specification at least at page 5, lines 8-10; Fig. 2; page 7, lines 1-9; and Fig. 6, as originally filed. No new matter has been introduced by way of these amendments. Claims 1, 3, 5, 7, 9, and 10 are pending for examination with claims 1, 3, 5, and 7 being independent. The application is believed to be in condition for allowance.

Rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103

The Office Action rejects claims 1, 3, 5, 7, 9 and 13 under 35 U.S.C. § 102(e) as being anticipated by Wong et al., U.S. Patent No. 6,363,077 B1 (Wong). The Office Action also rejects claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Wong in view of Chung et al., U.S. Patent No. 6,470,389 B1 (Chung).

Although Applicants do not agree with the rejections listed above, in order to expedite prosecution, claims 1, 3, 5, and 7 have been amended. Specifically claim 1 has been amended to further clarify "a composite trunk according to dynamically adjustable weighting". Claim 3 has been amended to further clarify "the table routes being dynamically adjustable." Claim 5 has been amended to further clarify a network "router" and "the trunk being selected with dynamically adjustable weighting." Claim 7 has been amended to further clarify a network "router" and "the table routes being dynamically adjustable." Applicants respectfully disagree with these rejections for the reasons set forth below.

An example of one embodiment of Applicants' invention is described below to highlight some aspects of the invention. It should be appreciated that the description below is an example of one of many embodiments that fall within the scope of Applicants' claims and is provided for the purpose of highlighting some aspects of Applicants' invention, not as a limitation of the claims.

An embodiment of the present invention makes use of a router including a composite trunk to balance the load across a set of trunks between two points. An output port selector balances the loading across the trunks of the composite trunk. The output port selector

10/021,205

- 5 -

determines the output port by table lookup. More specifically, a routing table maps destination addresses to composite trunks, and a fabric forwarding table (see Fig. 6) maps composite trunks to sets of possible routes within a routing fabric. If one output trunk of a composite trunk becomes a bottleneck, the fabric forwarding table can be adjusted to dynamically balance the load across the output trunks. The load can be balanced by finding a forwarding table entry that directs packets to the overloaded output trunk and rewriting the route in this entry to direct packets to a more lightly loaded output trunk. The output port selector dynamically balances load across the links of a composite trunk in this manner.

Wong does not describe a network router. Rather, Wong describes an Ethernet switch that allows trunking of Ethernet ports. (Wong, abstract and column 4, lines 16-20). The load balancing across trunk ports is performed by looking up the port to use based on the source port, the source MAC address or the source and destination MAC addresses. (Wong, column 6, lines 20-35). An Ethernet switch performs layer 2 switching of the Open System Interconnection (OSI) Reference Model. On the other hand, a router traditionally performs layer 3 switching of the OSI Reference Model and uses routing tables. Because Wong uses an Ethernet switch, it fails to teach or suggest a "network router" as required in claims 1, 3, 5, and 7.

Moreover, Wong does not describe "dynamically adjustable weighting" as required in claims 1 and 5. Further, Wong does not describe "table routes being dynamically adjustable" as required in claims 3 and 7. Although Wong does describe a load balancing technique, the load balancing technique is not dynamically adjustable. Rather, Wong describes the load balancing technique to be static and hence involve no dynamic adjustment in response to changes in the load. Specifically, "a destination port selected for a particular packet received at a particular source port is determined in accordance with a port-based static programmed mapping scheme." (Wong, column 6, lines 5-12). The load balancing scheme is static because the port mapping may only be changed by reprogramming the port mapping values stored in the system. (Wong, column 13, lines 38-56). By contrast, the load balancing in the present application is dynamically adjustable. For example, table routes may be adjusted during operation.

Because Wong uses a load balancing scheme that is static, it fails to teach or suggest "dynamically adjustable weighting" as required in claims 1 and 3. In addition, Wong fails to teach or suggest the table routes being "dynamically adjustable" as required in claims 5 and 7.

10/021,205

RECEIVED
CENTRAL FAX CENTER

SEP 12 2006

- 6 -

Thus, claims 1, 3, 5, and 7 patentably distinguish over the prior art of record. Dependent claims 9 and 10 depend directly or indirectly from independent claim 5 and therefore include all of the limitations of independent claim 5. Consequently, dependent claims 9 and 10 are allowable for at least the same reasons as argued above with respect to claims 1, 3, 5, and 7. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wong in view of Chung. Claim 10 is dependent on independent claim 5. Accordingly, claim 10 should be allowable for at least the same reasons as stated above with respect to claim 5. Further, one would not combine the Ethernet switch of Wong with the internet router of Chung. Accordingly, withdrawal of this rejection is respectfully requested.

10/021,205

- 7 -

RECEIVED
CENTRAL FAX CENTER

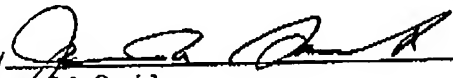
SEP 12 2006

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By 
James M. Smith
Registration No. 28,043
Telephone: (978) 341-0036
Facsimile: (978) 341-0136

Concord, MA 01742-9133

Dated: 